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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,446	11/30/2001	Jorg-Thomas Zettler	101215-75	6307

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BRUCE LONDA  
NORRIS, MCLAUGHLIN & MARCUS, P.A.  
220 EAST 42ND STREET, 30TH FLOOR  
NEW YORK, NY 10017

EXAMINER

LYONS, MICHAEL A

ART UNIT PAPER NUMBER

2877

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/998,446

Applicant(s)

ZETTLER ET AL.

Examiner

Michael A. Lyons

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities: the word "a" prior to the word "illumination" in line 4 should be "an". Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. In particular, this literal translation makes claims 4, 5, and 8 confusing, thereby making it difficult to determine what exactly is being claimed.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of

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the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation “a method of measuring characteristics”, and the claim also recites “especially the temperature of a multi-layer material”, which is the narrower statement of the range/limitation. Also, claim 1 recites the broad recitation “a multi-layer material”, and the claim also recites “especially of a semiconductor layer system”, which is the narrower statement of the range/limitation.

Claim 1 recites the limitation "the layer" in line 6. There is insufficient antecedent basis for this limitation in the claim. Which layer is being referred to?

Claim 1 recites the limitation "the process temperature" in line 7. There is insufficient antecedent basis for this limitation in the claim. Which process temperature is being referred to?

Claim 1 recites the limitation "the position", “the Fabry-Perot oscillations”, and “the growth rate” in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim. What position, Fabry-Perot oscillations, and growth rate is being referred to?

Claim 2 recites the limitation "the first minimum" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. What first minimum is being referred to?

Claim 3 recites the limitation "the actually measured reflectivity" and “the reflectivity” in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. What reflectivities are being referred to?

Claim 7 recites the limitation "the process time" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Which process time is being referred to?

Claim 9 recites the limitation "the temperature dependence" and "the real portion of the dielectric function of the participating materials" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. What temperature dependence and real portion of the dielectric function of the participating materials are being referred to?

***Allowable Subject Matter***

Claim 1 may be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action. The use of the values derived from Fabry-Perot oscillations generated within the surface that is being built up to determine temperature, composition, and other characteristics of the surface under test may be allowable.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Pat. 4,203,799 to Sugawara et al., a method for monitoring thickness of epitaxial growth layer on substrate, and US Pat. 4,555,767 to Case et al, a method and apparatus for measuring thickness of epitaxial layer by infrared reflectance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 703-305-1933. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on 703-308-4877. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0725 for regular communications and 703-308-0725 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0935.

MAL  
April 7, 2003



**Samuel A. Turner**  
**Primary Examiner**